BACKGROUND

DNA or RNA damage can hinder the ability of a cell to carry out its function and can significantly increase the likelihood of tumor formation. One of the causes of damaged DNA and RNA is oxidation of the bases. 8-hydroxy-2'-deoxyguanosine, 8-hydroxyguanine (8-OHdG) and 8-hydroxyguanosine are all markers of oxidative damage to RNA and DNA. 8-hydroxy-2'-deoxyguanosine is produced by reactive oxygen and nitrogen species, including hydroxyl radical and peroxynitrite. 8-Hydroxyguanine is one of the major base lesions involved in mutagenesis and is caused by ionizing radiation and radiomimetic agents. 8-hydroxy-guanosine induces a transversion of G to T in DNA, which may be mutagenic. Markers of DNA and RNA damage are useful research tools when studying the effects of this type of damage.

REFERENCES


PRODUCT

Each vial contains 200 µg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

8-OHdG (F-12) is recommended for detection of 8-OHdG (8-Hydroxy-2'-deoxyguanosine) by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:

DATA

8-OHdG (F-12): sc-393870. Immunofluorescence staining of formalin-fixed, paraffin-embedded red snapper liver tissue showing 8-OHdG staining in hepatocytes. Kindly provided by Saydur Rahman, Ph.D., Marine Science Institute, University of Texas.

SELECT PRODUCT CITATIONS


STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

See 8-OHdG (E-8): sc-393871 for 8-OHdG antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.